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CASIO

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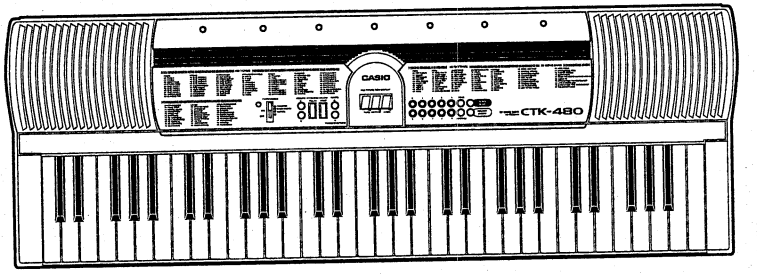
P
MA9603-A (英) (西) Printed in U.S.A.
CTK480 ES-1

20 SONGBANK KEYBOARD

CTK-480

ELECTRONIC MUSICAL INSTRUMENT
INSTRUMENTO MUSICAL ELECTRÓNICO

OPERATION MANUAL
MANUAL DE OPERACIÓN



P
(英) (西)
CTK480 ES-1

CASIO

Welcome...

To the happy family of satisfied CASIO electronic musical instrument owners! To get the most out of the many features and functions of the CTK-480, be sure to carefully read this manual and keep it on hand for future reference.

Important!

Promptly replace the batteries or use the AC adaptor when the following symptoms occur.

- Dim power supply indicator
- Abnormally low speaker/headphone volume
- Distortion of sound output
- A totally different tone may sound
- Abnormal rhythm pattern and demo tune play
- Continued sound output even after you release a button
- Occasional interruption of sound when playing at high volumes
- Sudden power failure when playing at high volumes

Please keep all information for future reference.

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A (not applicable to other areas).

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Main Features

❑ 100 amazingly realistic tones

❑ 20-tune Song Bank

- Play back tunes for listening enjoyment or turn off the melody part and play along on the keyboard.

❑ Auto-accompaniment

- Simply finger a chord and the keyboard automatically plays the correct rhythm, bass, and chord patterns. Includes push-button fill-in.

❑ Transpose Function

- An easy operation instantly changes the key of the keyboard.

Safety Precautions

Symbols

Various symbols are used in this operating manual and on the product itself to ensure that the product is used safely and correctly, and to prevent injury to the user and other persons as well as damage to property. Those symbols along with their meanings are shown below.

WARNING
This indication stipulates matters that have the risk of causing death or serious injury if the product is operated incorrectly while ignoring this indication.

CAUTION
This indication stipulates matters that have the risk of causing injury as well as matters for which there is the likelihood of occurrence of physical damage only if the product is operated incorrectly while ignoring this indication.

Symbol Examples

This triangle symbol (△) means that the user should be careful. (The example at left indicates electrical shock caution.)

This circle with a line through it (⃠) means that the indicated action must not be performed. Indications within or nearby this symbol are specifically prohibited. (The example at left indicates that disassembly is prohibited.)

The black dot (●) means that the indicated action must be performed. Indications within this symbol are actions that are specifically instructed to be performed. (The example at left indicates that the power plug must be unplugged from the electrical socket.)

⚠ WARNING

Please use caution regarding the handling of the AC adaptor.

- Do not use a voltage other than the indicated power supply voltage. Use of a voltage other than that indicated may cause fire or electrical shock.
- If the power cord should become damaged (exposed wires, disconnection, etc.), purchase a new AC adaptor. Use of a damaged power cord may cause fire or electrical shock.
- Do not cut or damage the power cord. Also do not place heavy objects on top of it or subject it to excessive heat. Damage to the power cord may cause fire or electrical shock.
- Do not attempt to shape the power cord or subject it to excessive bending, twisting or pulling. This may cause fire or electrical shock.
- Use only the AC adaptor that comes with the instrument. Use of another adaptor may cause fire, electrical shock, or malfunction.

Do not place containers containing water or other liquids on the instrument.

- Do not place the following objects on the instrument. Placing such objects on the instrument may cause fire or electrical shock if they spill and get inside the instrument.
  - Containers filled with water or other liquids (including vases, potted plants, cups, cosmetics and medicines)
  - Small metal objects (including hairpins, sewing needles and coins)
  - Flammable objects

  In the event a foreign object should happen to get inside the instrument, please take the following actions:
  1. Turn power off.
  2. Unplug the AC adaptor from the wall outlet.
  3. If there are any batteries loaded in the keyboard, remove them.
  - Do not touch the batteries directly with your hands when removing them. They may be hot or battery fluid may be leaking from them.
  4. Consult with the dealer where you purchased the keyboard or with an authorized CASIO service provider.

Do not disassemble or modify the instrument.

- Never attempt of take apart or modify the instrument, its accessories, or separately sold options. Doing so may cause fire, electrical shock or malfunction. Consult your dealer concerning all inspection, adjustment or repair of internal components.

Do not use if there is an abnormality or malfunction.

- Do not use the instrument if there appear to be abnormalities such as the presence of smoke or abnormal odor. Also do not use the instrument if there appear to be malfunctions such as the power not coming on or sound not being produced. Use under such conditions may cause fire or electrical shock. In such cases, take the following actions immediately. Never attempt to repair the instrument yourself.
  1. Turn power off.
  2. Unplug the AC adaptor from the wall outlet.
  3. If there are any batteries loaded in the keyboard, remove them.
  - Do not touch the batteries directly with your hands when removing them. They may be hot or battery fluid may be leaking from them.
  4. Consult with the dealer where you purchased the keyboard or with an authorized CASIO service provider.

When the instrument has been dropped:

- In the case the instrument has been dropped or damaged, take the following actions. Continued use may cause fire or electrical shock.
  1. Turn power off.
  2. Unplug the AC adaptor from the wall outlet.
  3. If there are any batteries loaded in the keyboard, remove them.
  - Do not touch the batteries directly with your hands when removing them. They may be hot or battery fluid may be leaking from them.
  4. Consult with the dealer where you purchased the keyboard or with an authorized CASIO service provider.

Be careful of the bags around children.

- Never allow anyone to place the plastic bags of the instrument, its accessories, and its separately sold options over their heads. Doing so may cause suffocation. Particular caution is required in homes with small children.

⚠ CAUTION

AC Adaptor

- Do not locate the power cord in close proximity to heaters or other heating appliances. This may cause the cord to melt leading to possible fire or electrical shock.
- When unplugging the AC adaptor from an electrical outlet, always make sure to pull on the adaptor itself and not the cord. Pulling excessively on the cord may cause it to be damaged or break leading to possible fire or electrical shock.
- Do not touch the AC adaptor with wet hands when it is plugged in. This may cause electrical shock.
- When not using the instrument for an extended period such as when traveling, always make sure to unplug the AC adaptor from the electrical outlet for safety reasons.
- After use turn off the power switch of the instrument and unplug the AC adaptor from the electrical outlet.

Batteries

- Improper battery use may cause batteries to rupture and leak. This may cause injury, malfunction of the instrument or discoloration of furniture and other articles that come into contact with battery fluid. Take care to observe the following.
  - Install batteries so their polarity (+/-) matches that indicated on the instrument.
  - For safety and to prevent possible leakage of battery fluid, always make sure to remove batteries from the instrument when you do not plan to use it for a long time.
  - Always make sure that the batteries making up a set are all of the same type.
  - Never combine new batteries with old ones.
  - Never dispose of batteries by incinerating them. Never short or disassemble batteries, and do not expose them to excessive heat.
  - Replace dead batteries as soon as possible.
  - Never attempt to recharge batteries.

Transport

- When transporting the instrument, always make sure to unplug the AC adaptor from the electrical outlet and confirm that all other external connections have been disconnected. Only then should the instrument be transported. If the above is not done, the cord may be damaged leading to possible fire or electrical shock.

Care

- Whenever caring, make sure to first unplug the AC adaptor from the electrical outlet. Also remove the instrument's batteries if battery power is being used.

Location

- Never locate the instrument in areas subject to high humidity or heavy accumulation of dust. Doing so may cause fire or electrical shock.
- Never locate the instrument in areas subject to grease splatters or steam, such as in a kitchen or near a humidifier. Doing so may cause fire or electrical shock.

Do not place keyboard on lacquered furniture.

- The instrument's silicone rubber feet may eventually blacken or scar lacquered surfaces. Use felt cloth pads to insulate the feet or preferably use a CASIO musical instrument stand designed for your keyboard.

Do not get onto the instrument or stand.

- Do not crawl on top of the instrument or its optional stand. Particular caution is required in homes having small children. This may cause the instrument or stand to tip over and break resulting in injury.

Do not place heavy objects on the instrument.

- Do not place heavy objects on the instrument. This may cause the instrument to tip over or break resulting in injury.

Optional Stand (sold separately)

- Carefully assemble the stand following the assembly instructions that come with it. Securely tighten all bolts, nuts, and fasteners, and make sure that you mount the instrument correctly onto the stand. Incorrectly or insufficiently tightening screws, or incorrectly mounting the instrument onto the stand can cause the stand to tip over or the instrument to fall off the stand, possibly leading to injury.

Volume

- Very high volume levels can damage hearing. Avoid using the instrument at very high volume settings for long periods. Consult with a physician immediately if you experience impaired hearing or ringing in the ears.

Accessories and options

- Use only accessories that come with the instrument or authorized CASIO options (sold separately). Use of non-specified accessories or options may cause fire, electrical shock, or malfunction.

Care of your keyboard

Avoid heat, humidity or direct sunlight.
Do not overexpose the unit to direct sunlight, or place near an air conditioner, or in any extremely hot place.

Take care not to drop the unit and avoid strong impact.
Strong impact may cause malfunctions. When carrying or transporting the unit, protect the keyboard and switches with soft cloth or other material.

Never attempt to modify any parts of the unit.
The unit is a precision instrument, made of electronic parts. Any modification of, or tampering with inner parts may cause malfunction.

Do not use lacquer, thinner or similar chemicals for cleaning.
Clean the keyboard with a soft cloth dampened in a weak solution of water and a neutral detergent. (Soak the cloth in the solution and squeeze until it is almost dry.)

Contents

Safety Precautions **E-4**

Care of your keyboard **E-7**

Contents **E-8**

Control Locations **E-10**

Quick Reference **E-12**

To switch power on and off E-12

To change tones E-12

To select and play a rhythm E-12

To play a Song Bank tune E-12

Using Synchro start E-13

Using auto-accompaniment E-13

To play a CASIO CHORD auto-accompaniment E-13

To play a FINGERED auto-accompaniment E-14

Other Useful Functions E-14

To change the key of the keyboard E-14

To tune the keyboard E-14

Part 1 Before using the keyboard **E-15**

About the power supply E-15

Installing the batteries E-15

Using AC power E-16

Auto Power Off function E-16

To cancel the Auto Power Off function E-16

Part 2 Basic operations **E-17**

To switch power on and off E-17

To change tones E-17

Keyboard split tones E-18

Digital Sampling E-19

Polyphony E-19

Playing rhythms E-19

To select and play a rhythm E-19

Improvising with the preset patterns E-20

Using fill-in rhythm E-20

Using Synchro start E-21

Using the Song Bank E-21

To play back a Song Bank tune E-21

To play along with a Song Bank tune E-22

To change the tone of the melody part of a Song Bank tune E-22

Using auto-accompaniment E-23

About the accompaniment keyboard E-23

Using the CASIO CHORD system E-23

To play a CASIO CHORD auto-accompaniment E-24

Using standard fingerings E-25

To play a FINGERED auto-accompaniment E-26

Other Useful Functions E-26

To change the key of the keyboard E-26

To tune the keyboard E-28

Part 3 Technical Reference **E-29**

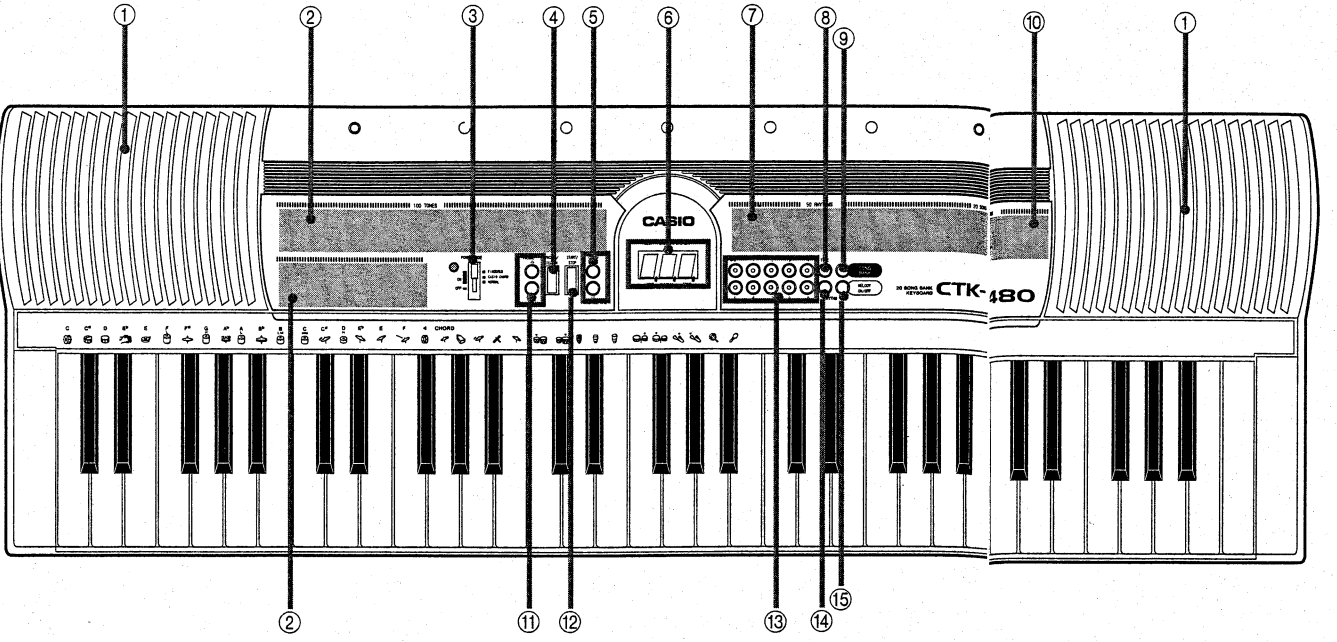
Troubleshooting E-29

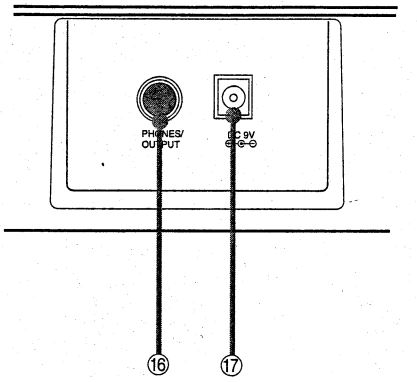
Specifications E-30

Part 4 Appendix **A-1**

Fingered Chord Charts A-1

Control Locations



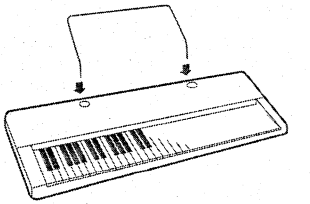


① **Speakers**
② **100 TONES list**
③ **POWER/MODE selector**
④ **SYNCHRO/FILL-IN button**
⑤ **TEMPO/TRANSPOSE/TUNE buttons**
⑥ **Display**
⑦ **50 RHYTHMS list**
⑧ **TONE button**
⑨ **SONG BANK button**
⑩ **20 SONG BANK list**
⑪ **VOLUME buttons**
⑫ **START/STOP button**
⑬ **0-9 buttons**
⑭ **RHYTHM button**
⑮ **MELODY ON/OFF button**
⑯ **PHONES/OUTPUT jack**
For connection of commercially available headphones. Output from the speakers is automatically cut when headphones are connected.
⑰ **DC 9V jack**

Note

- You may notice lines in the finish of the case of this keyboard. These lines are a result of the molding process used to shape the plastic of the case. They are not cracks or breaks in the plastic, and are no cause for concern.

*** Attachment of Score Stand**
Insert both ends of the music stand provided with the CTK-480 into the two holes on the top surface.

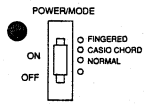


Quick Reference

This part of the manual provides a brief overview of keyboard operation. This is meant for experienced users, so be sure to read the rest of the manual for details before trying to actually use the keyboard.

- Before beginning operation, please make preparations for the power supply by referring to "About the Power Supply" (page E-15).

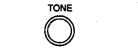
To switch power on and off (page E-17)



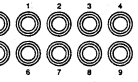
Slide the POWER/MODE selector to "NORMAL" position.

To change tones (page E-17)

1. Slide the POWER/MODE selector to "NORMAL" position.



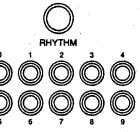
2. Press the TONE button.



3. Use the 0-9 buttons pad to input the 2-digit number that identifies the tone you want to select.

To select and play a rhythm (page E-19)

1. Slide the POWER/MODE selector to "NORMAL" position.



2. Press the RHYTHM button.

3. Use the 0-9 buttons pad to input the 2-digit rhythm number for the rhythm you want to use.

4. Press the START/STOP button to start play of the rhythm.

5. To stop rhythm play, press the START/STOP button again.

To play a Song Bank tune (page E-21)

1. Press the SONG BANK button until the SONG BANK indicator lights.

2. Use the 0-9 buttons to input the 2-digit song number of the tune you want to play.

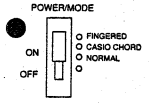
SONG BANK indicator

3. If you want to turn off the tune's melody and play along on the keyboard, press the MELODY ON/OFF button.

4. Press the START/STOP button to start play of the tune.

5. To stop song play, press the START/STOP button again.

Using Synchro start (page E-21)



1. Set the POWER/MODE selector to the CASIO CHORD or FINGERED position.

2. Select an auto-rhythm.

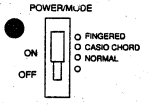
3. Press the SYNCHRO/FILL-IN button.

4. Press the accompaniment keys to play the first chord. As soon as you do, the auto-accompaniment pattern begins to play.

5. To stop the auto-accompaniment pattern play, press the START/STOP button.

Using auto-accompaniment (page E-23)

To play a CASIO CHORD auto-accompaniment



1. Slide the POWER/MODE selector to "CASIO CHORD" position.

2. Select an auto-rhythm.

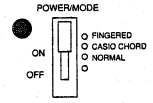
3. Start play of the rhythm.

4. Press either one or up to four keys on the accompaniment keyboard (lower 1.5 octaves, page E-23), and the corresponding accompaniment starts to play automatically.

5. Continue pressing different keys on the accompaniment keyboard.

6. To stop auto-accompaniment play, press START/STOP again.

To play a FINGERED auto-accompaniment



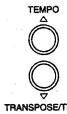
1. Slide the POWER/MODE selector to "FINGERD" position.
2. Select an auto-rhythm.
3. Start play of the rhythm.
4. Play a chord on the accompaniment keyboard (lower 1.5 octaves) to start play of the auto-accompaniment.
5. Continue pressing keys on the accompaniment keyboard.

6. To stop auto-accompaniment play, press START/STOP again.

■ Other Useful Functions (page E-26)

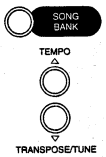
To change the key of the keyboard

1. While holding down the TONE button, press the RHYTHM button.



2. Use the TEMPO and TRANSPOSE/TUNE buttons to change the key of the keyboard.

To tune the keyboard



1. While holding down the TONE button, press the SONG BANK button.
2. Use the TEMPO and TRANSPOSE/TUNE buttons to change the tuning of the keyboard.

Part 1 Before using the keyboard

Be sure to read the contents of this part of the manual before using the keyboard for the first time.

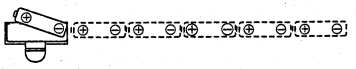
■ About the power supply

You can power your keyboard with 6 AA batteries, standard AC power (with an optional AC adaptor) .

Installing the batteries

This keyboard can be powered by 6 AA size (SUM-3/R6P) manganese dry cell batteries. Make sure that the unit is turned off when installing batteries.

1. Open the battery compartment cover on the bottom of the unit.
2. Load new batteries as illustrated, taking care that the plus (+) and minus (–) poles are facing in the correct directions.
3. Replace the battery compartment cover.
   - Standard battery life is approximately 2 hours (SUM-3/R6P), 4 hours (AM3/LR6).



Important!

Promptly replace the batteries or use the AC adaptor when the following symptoms occur.

- Dim power supply indicator
- Abnormally low speaker/headphone volume
- Distortion of sound output
- A totally different tone may sound
- Abnormal rhythm pattern and demo tune play
- Continued sound output even after you release a button
- Occasional interruption of sound when playing at high volume
- Sudden power failure when playing at high volumes

Precautions

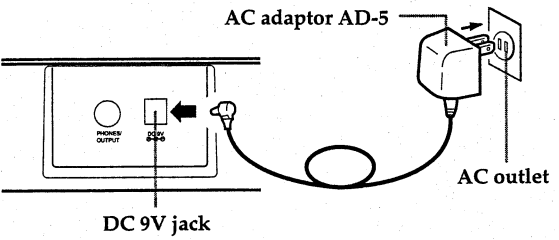
Incorrectly using batteries can cause them to leak or burst, and may damage your unit. Note the following precautions:

- Be sure that the plus (+) and minus (–) poles are facing in the correct directions.
- Do not mix battery types.
- Do not mix new batteries with old ones.
- Never leave dead batteries in the battery compartment.
- Remove batteries when not using the unit for extended periods.
- Never try to recharge the batteries that are specified for the power supply of this unit.

- Do not expose batteries to direct heat, let them become shorted or try to take them apart. (If a battery leaks, clean out the battery compartment of the unit immediately, taking care to avoid letting the battery fluid come into direct contact with your skin.)

Using AC power

An AC adaptor (AD-5, optional) is required when using household current. Use only a genuine CASIO adaptor with the same voltage rating (100, 120, 220, 230 or 240V) as the power supply in your area to prevent damage to internal components. Be sure to turn the power of the unit off before you connect the adaptor to the unit. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.



Note
The shapes of the AC adaptor's plug and wall outlet differ in accordance with countries or regions.
The illustration is an example.

Important!
- The adaptor may become warm when it is being used. This is normal and does not indicate any problem.
- Be sure to unplug the adaptor from the power source when you are not using the unit.
- Whenever connecting or disconnecting the adaptor, be sure that the power of the unit is switched off.
- Never use a power supply that does not match that specified for the unit. Doing so can damage the adaptor or your unit.

Auto Power Off function

The Auto Power Off function automatically switches power off if you do not perform any operation for about six minutes. When this happens, change the POWER/MODE selector position to OFF and then to NORMAL, CASIO CHORD, or FINGERED to turn power back on. You can also use the following operation to cancel the Auto Power Off function so that it does not switch power off.

Note
- The Auto Power Off function is invalid when the keyboard is powered by an AC adaptor.

To cancel the Auto Power Off function

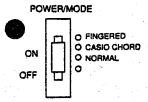
While holding down the TONE button, switch power on.
- The Auto Power Off function remains cancelled until you manually switch power off.

Part 2 Basic operations

This part of the manual provides you with the basic information you need to use your keyboard.

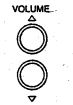
■ To switch power on and off

1. Slide the POWER/MODE selector to "NORMAL" position.



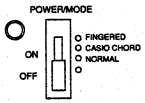
2. Press the keyboard keys.

3. The VOLUME up and down arrow buttons are used to adjust main volume.



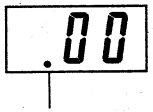
- Pressing ▲ or ▼ displays the currently set volume setting. Press ▲ or ▼ again to change the volume setting.
- Volume can be adjusted over a range of 0 (minimum) to 9 (maximum).
- Volume is set to 7 when the power is turned on.
- A setting of 0 turns down the volume completely.
- The volume can be changed continuously by continuously pressing down the up or down buttons.
- Pressing the up and down buttons simultaneously sets the volume to level 7.
- Numeric values can be entered directly with the 0-9 buttons after the volume button has been pressed in step 3.
- The amount that the volume settings raises or lowers the volume level differs according to the tone, auto accompaniment, or song you are using.

4. To switch power off, slide the POWER/MODE selector to "OFF" position.



■ To change tones

1. Look at the tone list printed on the keyboard's console and find the one you want.
   - A total of 100 tones are available.

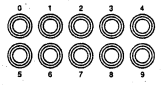


Tone indicator

2. Press the TONE button.

- The number for the tone that is currently selected is shown on the display.

3. Use the 0-9 buttons to input the 2-digit number that identifies the tone you want to select.



- Always enter two digits for the tone number. If you enter only one digit, the display will automatically return to the previous tone number setting after a few seconds.
- If you change the tone setting while a keyboard key is depressed, the tone does not change until you release the key and press a keyboard key again.
- You can specify tone numbers in the range of 00 to 99.

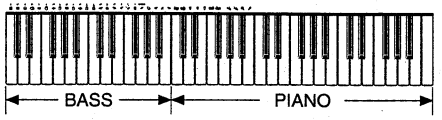
- If you input the wrong first digit for a tone number, you can return to the previous setting by pressing the TONE button.

Keyboard split tones

Some of the preset tones split the keyboard and assign two or more sounds. With such a preset tone, the sound produced depends on what position of the keyboard you play. For example, BASS/PIANO (tone 90) puts BASS on the left and PIANO on the right of the keyboard.

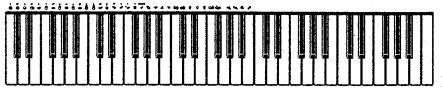
<Example>

BASS/PIANO (No.90)



PERCUSSION (No.99)

- PERCUSSION (tone 99) assigns 35 percussion sound to the keyboard as illustrated below. The sound assigned to each key are indicated above the keyboard.



BASS DRUM
SIDE STICK
ACOUSTIC SNARE
HAND CLAP
ELECTRIC SNARE
LOW FLOOR TOM
CLOSED HI-HAT
HIGH FLOOR TOM
PEDAL HI-HAT
LOW TOM
OPEN HI-HAT
LOW-MID TOM
HIGH-MID TOM
CRASH CYMBAL 1
HIGH TOM
RIDE CYMBAL 1
CHINESE CYMBAL
RIDE BELL
TAMBOURINE
SPLASH CYMBAL
COWBELL
CRASH CYMBAL 2
CLAVES
RIDE CYMBAL 2
HIGH BONGO
LOW BONGO
MUTE HIGH CONGA
OPEN HIGH CONGA
LOW CONGA
HIGH TIMBALE
LOW TIMBALE
HIGH AGOGO
LOW AGOGO
CABASA
MARACAS

Digital Sampling

A number of the tones that are available with this keyboard have been recorded and processed using a technique called digital sampling. To ensure a high level of tonal quality, samples are taken in the low, mid, and high ranges and then combined to provide you with sounds that are amazingly close to the originals. You may notice very slight differences in volume or sound quality for some tones when you play them at different positions on the keyboard. This is an unavoidable result of multiple sampling, and it is not a sign of malfunction.

Polyphony

The term polyphony refers to the maximum number of notes you can play at the same time. The CTK-480 has 12-note polyphony, which includes the notes you play as well as the rhythms and auto-accompaniment patterns that are played by the keyboard. This means that when a rhythm or auto-accompaniment pattern is being played by the keyboard, the number of notes (polyphony) available for keyboard play is reduced. Also note that some of the tones offer only 6-note polyphony.

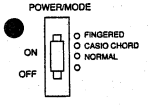
- When rhythm or auto accompaniment is playing, the number of sounds simultaneously played is reduced.

■ Playing rhythms

This keyboard features a collection of 50 exciting built-in rhythm patterns. Each pattern provides percussion back up for all your performances.

To select and play a rhythm

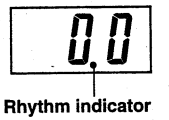
1. Set the POWER/MODE selector to NORMAL.



2. Look at the rhythm list printed on the keyboard's console and find the one you want.

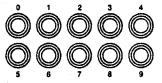
3. Press the RHYTHM button.

- When you do, the rhythm indicator lights.
- The number that appears on the display indicates the currently selected rhythm.

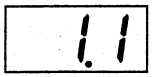


Rhythm indicator

4. Use the 0-9 buttons to input the 2-digit rhythm number for the rhythm you want to use. To select "11 SLOW ROCK", for example, input 1, 1.



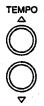
- Be sure to always specify a 2-digit number.
- You cannot specify numbers greater than 50.
- If you discover a mistake before you input the second digit, press the RHYTHM button to return to the previously set rhythm number.



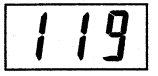
5. Press the START/STOP button to start play of the rhythm.

- When you do, the selected rhythm starts to sound.

6. Use the TEMPO buttons to adjust the tempo of the rhythm.



- Pressing ♁ or ♀ displays the currently set tempo setting. Press ♁ or ♀ again to change the tempo setting.
- When you press one of the TEMPO buttons, the tempo setting appears on the display. The value indicates the number of beats per minute. The display returns to normal shortly after you release the TEMPO button.
- Each time you press one of the TEMPO buttons while the tempo value is displayed, the tempo setting changes one step, within the range of 040 to 255.



- Holding down either of the TEMPO buttons changes the tempo setting at high speed.
- To reset the tempo to the standard value of each rhythm, press both TEMPO buttons.
- Be sure to always specify a 3-digit number.
- Specifying a tempo below 040 or above 255 does not change the current setting.

7. To stop rhythm play, press the START/STOP button again.

■ Improvising with the preset patterns

Pressing the START/STOP button to start rhythm play causes the normal version of the pattern to be played. You can also play a variation of the rhythm using the operation described below.

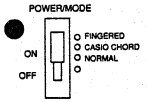
■ Using fill-in rhythm

You can insert a fill-in rhythm by pressing the SYNCHRO/FILL-IN button while an auto-rhythm plays.

■ Using Synchro start

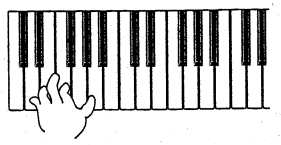
You can start the rhythm and accompaniment pattern at the same time, with your play of the accompaniment keyboard. To do this, follow the steps below.

1. Set the POWER/MODE selector to the CASIO CHORD or FINGERED position.



2. Select an auto-rhythm.
3. Press the SYNCHRO/FILL-IN button.

4. Press the accompaniment keys to play the first chord. As soon as you do, the auto-accompaniment pattern begins to play.



- When you select the NORMAL mode, and press the accompaniment key only the selected rhythm starts to play.

5. To stop the auto-accompaniment pattern play, press the START/STOP button.

Note

- If you set the POWER/MODE selector to NORMAL in step 1, the operation in step 3 starts play of the rhythm (percussion instruments) only.

■ Using the Song Bank

You can use the 20 tunes that come pre-recorded in the Song Bank for your listening enjoyment, or you can turn off the melody part and play along on the keyboard.

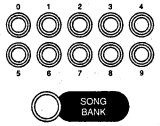
To play back a Song Bank tune

1. Find the tune you want to play in the Song Bank list on the keyboard's console.
2. Press the SONG BANK button.

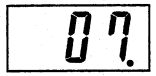
- When you do, the Song Bank indicator appears on the display, along with the currently selected Song Bank tune.

Song Bank indicator

3. Use the 0-9 buttons to input the 2-digit song number for the tune you want to play. To select "07 Greensleeves" for example, input 0 and then 7.



- Be sure to always input a 2-digit number within the range of 00 to 19.
- If you make a mistake when inputting the first digit, you can return to the previously specified song number by pressing the SONG BANK button.



4. Press the START/STOP button to start play of the tune.

- Note that you can repeat step 3 to change to another tune even while the current tune is playing.

5. To stop playback of the tune, press the START/STOP button again.

To play along with a Song Bank tune

1. Perform steps 1, 2, and 3 under "To play back a Song Bank tune" to select the tune you want to play along with.

2. Press the MELODY ON/OFF button to turn the melody part off.

3. Press the START/STOP button to start play of the tune.

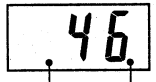
4. Play along with the tune (less melody part) on the keyboard.

To change the tone of the melody part of a Song Bank tune

1. Perform steps 1, 2, and 3 under "To play back a Song Bank tune" to select the tune whose melody tone you want to change.

2. Press the TONE button.

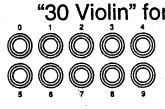
- When you do, the Tone indicator appears on the display along with Song Bank indicator and song number.

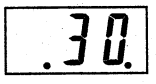


Tone indicator

Song Bank indicator

3. Use the 0-9 buttons to input the 2-digit tone number for the tone you want to use. To select "30 Violin" for example, input 3 and then 0.





4. Press the START/STOP button to start play of the tune.

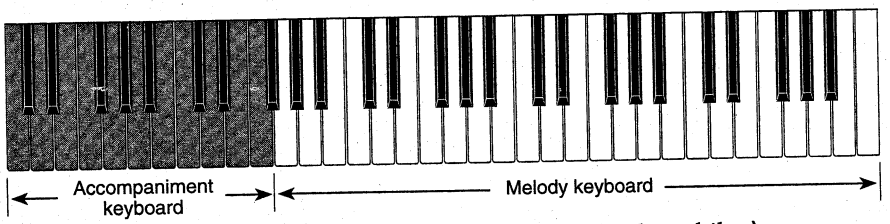
- Note that you can perform the above procedure to change to another tone even while the tune is playing.
- A tune's default melody tone is automatically selected whenever you input the song number of the tune.

■ Using auto-accompaniment

This keyboard features 50 accompaniment patterns that let you add full accompaniments to your performances automatically. With auto-accompaniment, part of the keyboard is reserved as an accompaniment keyboard. As you play your chords on the accompaniment keyboard, the accompaniment patterns adjusts automatically to follow the progression you play.
You get a choice between two different methods for chord play. FINGERED lets you play chords as you normally do, while CASIO CHORD makes it possible to play fully formed chords with one finger.

About the accompaniment keyboard

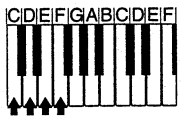
The lower (left) 1.5 octaves are reserved for use as an accompaniment keyboard whenever you select CASIO CHORD or FINGERED with the POWER/MODE selector. The panel above the accompaniment keyboard keys is marked with the names of the notes they play. The remainder of the keyboard (the part that is not included in the accompaniment keyboard) is called the melody keyboard. Please be sure to remember these terms, because they will be used throughout the rest of this manual.



(The entire keyboard can be used for melody play while the POWER/MODE selector is set to NORMAL.)

Using the CASIO CHORD system

The CASIO CHORD system lets you easily play the four main types of chords. Play of chords is simplified as shown in the chart on the next page.

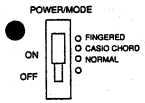
Keys	Chord Type	Example
Pressing **one** accompaniment key	Major chord	C (C Major Chord)
Pressing **two** accompaniment keys	Minor chord	Cm (C Minor Chord)
Pressing **three** accompaniment keys	Seventh chord	C7 (C Seventh Chord)
Pressing **four** accompaniment keys	Minor seventh chord	Cm7 (C Minor Seventh Chord) 

Note

- The bottom (leftmost) note that you play determines the name of the chord. If the bottom note is a C for example, the keyboard produces a C chord.

To play a CASIO CHORD auto-accompaniment

1. Use the POWER/MODE selector to select CASIO CHORD.



2. Select an auto-rhythm as described under "To select and play a rhythm" on page E-19.

3. Start play of the rhythm.

- If you want start play of the normal rhythm pattern, press START/STOP.
- You can also use synchro start (page E-21) to start rhythm play.

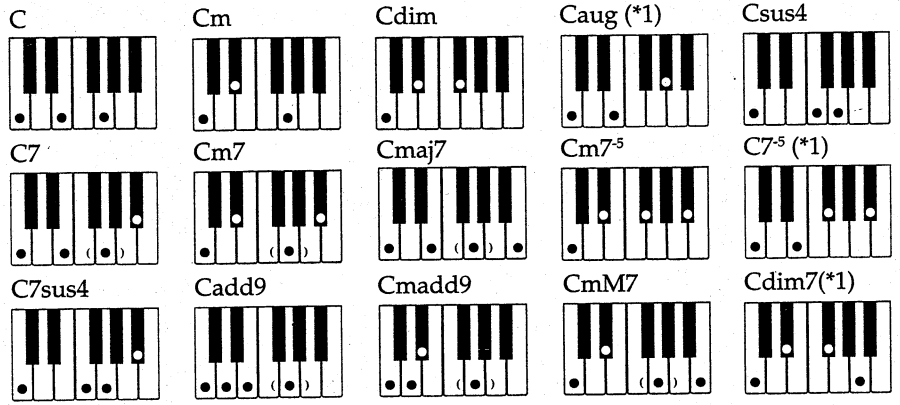
4. Press either one or up to four keys on the accompaniment keyboard, and the corresponding accompaniment starts to play automatically.

5. Continue pressing different keys on the accompaniment keyboard to play your chord progression.

6. To stop auto-accompaniment play, press START/STOP again.

Using standard fingerings

The FINGERED mode lets you play a wider variety of chords. In this mode, you can start play of an accompaniment pattern by pressing three or four of the accompaniment keyboard keys.
This keyboard is capable of recognizing 15 different chords. The following shows the fingerings of these chords with a root of C. Note that you can omit the fifth notes (which are shown inside parentheses in the illustrations below) to produce 7, m7, maj7, add9 and mM7 chords.



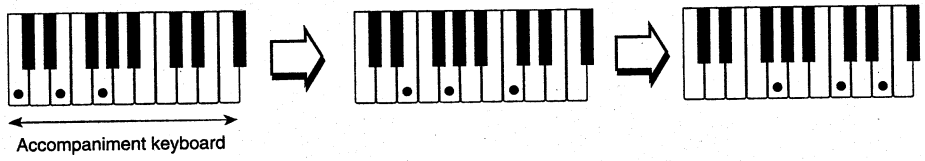
*1 With this chords, the lowest note in your fingering is always used as the root. Make sure that your fingering correctly identifies the root you want to use.

Important!

- If you play one or two notes only in the left hand, or three notes that do not make up a recognizable chord formation, no sound will be produced. FINGERED mode requires a conventional three or four-note chord formation to produce an auto-accompaniment. Also, note that auto-chords only work in conjunction with rhythm patterns, and not independently of them.

Notes

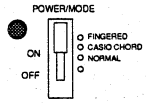
- The above examples show only one of the possible fingerings for each chord. Note that you can play the notes that form a chord in any combination. Each of the following fingerings for example, produces the same C chord.



- See the "Fingered Chord Charts" on page A-1 for information on the fingerings of chords for all roots.

To play a FINGERED auto-accompaniment

1. Use the POWER/MODE selector to select FINGERED.



2. Select an auto-rhythm as described under "To select and play a rhythm" on page E-19.
3. Start play of the rhythm.

- If you want start play of the normal rhythm pattern, press START/STOP.
- You can also use synchro start (page E-21) to start rhythm play.

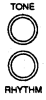
4. Play a chord on the accompaniment keyboard to start play of the auto-accompaniment.
5. Continue pressing keys on the accompaniment keyboard to play your chord progression.
6. To stop auto-accompaniment play, press START/STOP again.

■ Other Useful Functions

To change the key of the keyboard

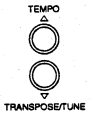
The transpose feature of this keyboard lets you raise or lower its key in semitone increments. This means you can easily match to suit someone's voice, and you can eliminate sharps and flats from music making it easier to play.

1. While in any mode besides the Song Bank Mode (indicated by a dot in the first digit of the display), hold down the TONE button and perss the RHYTHM button.

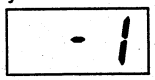


- Perform step 2 within five seconds after performing step 1.

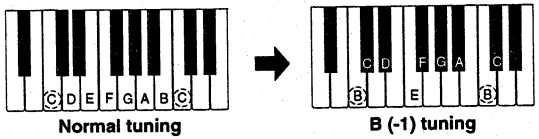
2. Use the TEMPO and TRANSPOSE/TUNE button to change the key of the keyboard.



- Example: To change the tuning to B (indicated by -1 since it is one tone below C, which is the normal tuning of the keyboard).
- See page E-27 for the indicator that appears for each key.



Indicator remains on the display for a few seconds.



Normal tuning **B (-1) tuning**

<Keys and their indicators> Pressing

Key :	F#	G	A♭	A	B♭	B	C	C#	D	E♭	E	F
Display:	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5

Pressing

<Note Names>

Notes

- **You cannot change the transpose setting while the keyboard is in the Song Bank Mode.**
- **In step 2 of the above operation, you could also use number button [0] to [5] to specify C through F.**
- Pressing both of the TRANSPOSE/TUNE buttons at the same time returns the transpose setting to C(0).
- The transpose setting is automatically set to C(0) whenever you turn keyboard power on.
- The transpose setting is automatically set to C(0) whenever you press the SONG BANK button.
- The pitch of a transposed note depends on the tone you are using. If the transpose operation causes a note to exceed its upper range, the same note from the lowest octave available is substituted.
- The transpose operation does not affect tone number 99 (Percussion) or autoaccompaniment rhythms.
- Transposing tones 75 through 79 and 90 through 96 changes the keyboard assignments. See page E-18.

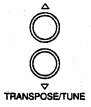
To tune the keyboard

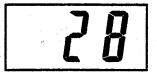
A simple operation lets you tune the keyboard to another musical instrument.

1. While in any mode besides the Song Bank Mode (indicated by a dot in the first digit of the display), hold down the TONE button and press the SONG BANK button.

- Perform step 2 within five seconds after performing step 1.

2. Use the TRANSPOSE/TUNE button to change the tuning of the keyboard.





Indicator remains on the display for a few seconds.

Notes

- In step 2 of the above procedure, you could also use number buttons 0 through 9 to input a value from 00 to 50.
- Pressing both of the TRANSPOSE/TUNE buttons ▲ ▼ at the same time returns the tuning setting to 00.
- Pressing the SONG BANK button changes the tuning setting to 00.
- The tuning setting does not affect any of the 20 Song Bank tunes.
- You can tune the keyboard within a range of approximately ±50 cents (100 cents = 1 semitone).
- The tuning setting is automatically set to 00 whenever you turn the keyboard on.
- The tuning operation does not affect auto-accompaniment rhythms.
- The tuning operation does not affect rhythm (percussion).

Part 3 Technical Reference

■ Troubleshooting

Be sure to check the following table whenever you experience problems with keyboard operation.

Problem	Possible Causes	Action
No sound when playing the keyboard.	1. Power supply problem.	1. Connect AC adaptor correctly and make sure that batteries are loaded with the positive (+) and negative (–) poles facing correctly.
	2. VOLUME is set to 0.	2. Press the VOLUME ▲ button to increase overall volume.
	3. Headphones are plugged in.	3. Unplug the headphones.
	4. You are attempting to play normally on the accompaniment keyboard while CASIO CHORD or FINGERED is selected.	4. Set the POWER/MODE selector to NORMAL.
Following symptoms occur when using batteries. • Dim power supply indicator • Abnormally low speaker /headphone volume • Distortion of sound output • A totally different tone may sound • Abnormal rhythm pattern and demo tune play • Continued sound output even after you release a button • Occasional interruption of sound when playing at high volumes • Sudden power failure when playing at high volumes	Low battery power.	Replace the batteries with new ones.

■ Specifications

Model: CTK-480

Keyboard: 61 standard-size keys; 5 octaves

Tones: 100 presets

Polyphony: 12 - note (max.)

Auto-accompaniment:
Rhythm patterns 50 presets
Tempo Adjustable (40 ~ 255), initial value: 120
Chords Two systems: CASIO CHORD, FINGERED
Others Fill-in pattern, intro

Song Bank:
Number of Songs; 20
Song mode; Melody ON/OFF

Other Functions:
Transpose ($F^{\#}$~C~F: half-note)
Tuning Adjustable (-50 ~ 50) A4 = Approx. 440 Hz, ±50 cents, initial value: 00 (A4 = Approx. 440 Hz)

Speakers: 10 cm diameter x 2 (Output: 2W+2W)

Digital Volume Control: Main volume; 10 steps (0 ~ 9), initial value: 7

I/O Terminals:
Power Supply DC 9V jack
Phones/Output Stereo standard jack
[output impedance: 66 Ω, output voltage: 2.8V (RMS) MAX],

Power Supply: 2-way AC/DC power sources;
Batteries 6 AA-size
Battery life approximately 2 hours on R6P (SUM-3), 4 hours on LR6 (AM3)
AC Required optional AD-5 AC adaptor

Auto power off: Approximately 6 minutes after the last operation (Operates during battery use only)

Power consumption: 9V ⎓ 7.7 W

Dimensions: 910 x 322 x 90 mm (35 13/16" x 12 11/16" x 3 1/2")

Weight: 3.9 kg (8.6 lbs) excluding batteries

* Designs and specifications are subject to change without notice.

■ Especificaciones

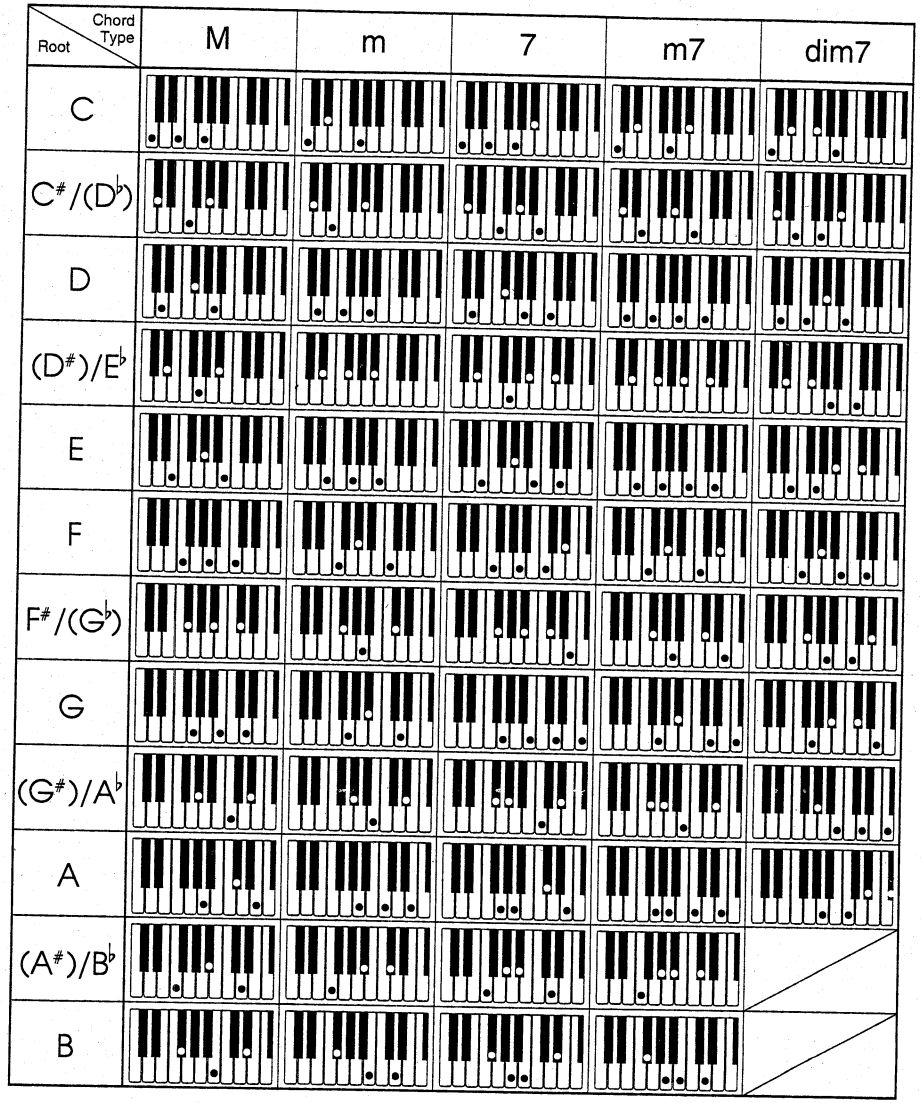
Modelo:	CTK-480
Teclado:	61 teclas normales; 5 octavas
Sonidos:	100 preajustes
Polifonía:	12 notas (máximo)
Acompañamiento automático:	Patrones de ritmo 50 preajustes Tempo Ajustable (*= 40 a 255), valor inicial: 120 Acordes 2 sistemas: CASIO CHORD, FINGERED Otros Patrón de relleno, patrón de introducción
Banco de canciones:	Número de canciones: 20 Modo de canción; activación/desactivación de melodía
Otras funciones:	Transposición ($F^{\#}$~C~F): blanca (media nota) Afinación Ajustable (-50 ~ 50) A4 = Approx. 440 Hz, ±50 centésimas, valor inicial: 00 (A4 = 440 Hz)
Altavoces:	10 cm de diámetro x 2 (salida: 2W + 2W)
Control de volumen digital:	Volumen principal; 10 intervalos (0-9), valor inicial: 7
Terminales I/O:	Alimentación Toma de CC de 9V Fono/Salida: Toma estándar estéreo [Impedancia de salida: 66 Ω, tensión de salida: 2,8 V (eficaz) MAX.]
Alimentación:	2 modos de alimentación mediante AC/CC: Pilas Seis pilas de tamaño AA Duración de pilas Aproximadamente 2 horas con las pilas SUM-3/R6P, 4 horas con las pilas AM3/LR6. CA Se requiere adaptador de CA AD-5
Apagado automático:	Aproximadamente 6 minutos después de la última operación de tecla (Opera solamente durante el uso con pilas)
Consumo de energía:	9V = 7,7 W
Dimensiones:	910 x 322 x 90 mm
Peso:	3,9 kg (sin pilas)

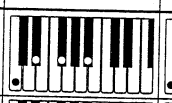
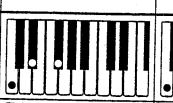
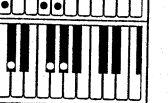
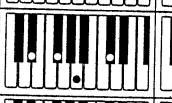
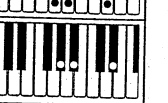
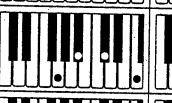
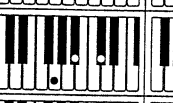
* El diseño y las especificaciones están sujetos a cambios sin previo aviso.

Part 4 Appendix/Apéndice

■ Fingered Chord Charts

■ Cuadros de acordes Fingered



Root \ Chord Type	M7	m7-5	dim	aug	sus4
C					
C♯/(D♭)					
D					
(D♯)/E♭					
E					
F					
F♯/(G♭)					
G					
(G♯)/A♭					
A					
(A♯)/B♭					
B					

Root \ Chord Type	7sus4	m add9	mM7	7^{-5}	add9
C					
C♯/(D♭)					
D					
(D♯)/E♭					
E					
F					
F♯/(G♭)					
G					
(G♯)/A♭					
A					
(A♯)/B♭					
B					